

App. No. 10/654,343
Office Action Dated February 7, 2006

REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. The Specification and claims 15 and 19 are hereby amended.

Amendment of claim 15 is supported by page 17, lines 17-18, page 27, line 37 to page 28, line 2, and Figure 2B. Claim 19 is amended to track with claim 15.

The abstract was objected to for informalities. The abstract is amended to address the concerns of the Examiner. Favorable reconsideration the abstract is requested.

The title is object to for not being descriptive. The title is amended to address the concerns of the Examiner. Favorable reconsideration of the title is requested.

Claims 15, 25-27, 33, and 34 were rejected as being unpatentable over Somaki (US 5,641,113) in view of Chen (US 6,260,264). Applicants traverse this rejection. The combination of Somaki and Chen does not suggest a method for manufacturing an electric element built-in module including flip-chip mounting an electric element on a wiring pattern, sealing the electric element with a thermosetting resin composition, and then grinding or abrading the electric element from a sealed side, as required by claim 15. Rather, Somaki and Chen teach grinding tips of bumps of a semiconductor element on a wiring pattern. The references do not suggest flip-chip mounting of an electric element on a wiring pattern for subsequent sealing and grinding or abrading. In contrast, the method of claim 15 provides an electric element built-in module with a reduced profile, thereby allowing high-density packaging. Favorable reconsideration of claims 15, 25-27, 33, and 34 is requested.

Claims 20-23 and 35 were rejected as being unpatentable over Somaki, in view of Chen, and further in view of Janssen (US 3,634,168). Applicants traverse this rejection. Claims 20-23 and 35 should be considered allowable for at least the same reasons as claim 15, from which they depend. Janssen does not remedy the deficiencies of Somaki and Chen, as previously noted.

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Applicants are not conceding the correctness of the rejection as applied to the rejected claims. Favorable reconsideration of claims 20-23 and 35 is requested.

Claim 24 was rejected as being unpatentable over Somaki, in view of Chen, and further in view of Saito (US 4,913,697). Applicants traverse this rejection. Claim 24 should be considered allowable for at least the same reasons as claim 15, from which it depends. Saito does not remedy the deficiencies of Somaki and Chen, as previously noted. Applicants are not conceding the correctness of the rejection as applied to the rejected claim. Favorable reconsideration of claim 24 is requested.

Claim 28 was rejected as being unpatentable over Somaki, in view of Chen, and further in view of "Official Notice". Applicants traverse this rejection. Claim 28 should be considered allowable for at least the same reasons as claim 15, from which it depends. The subject matter taken by "Official Notice", even assuming arguendo its availability as prior art, does not remedy the deficiencies of Somaki and Chen, as previously noted. Applicants are not conceding the correctness of the rejection as applied to the rejected claim. Favorable reconsideration of claim 28 is requested.

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions regarding this communication can be directed to the undersigned attorney, Douglas P. Mueller, Reg. No. 30,300, at (612)455-3804.

Respectfully Submitted,



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Dated: April 17, 2006



DPM:mfe

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ABSTRACT

A method for manufacturing an electric element built-in module including flip-chip mounting at [[At]] least [[two]] one electric element elements (203) such as a semiconductor chip chips or a surface acoustic wave device devices are mounted on a wiring pattern patterns (201), sealing [[and]] the electric element elements (203) are sealed with a thermosetting resin composition, [[(204)]] and grinding or abrading the thermosetting resin composition and electric element from a side of the electric element opposite that of the wiring pattern. An upper surface of the at least two electric elements (203) and an upper surface of the thermosetting resin composition (204) are abraded at the same time, thereby forming The method provides upper surfaces of the electric element and the thermosetting resin composition that are substantially flush with each other. Since they are abraded while being sealed with the thermosetting resin composition (204), The method provides an electric element built-in module suitable for high-density packaging with it is possible to reduce the a reduced thickness without damaging the electric element elements (203). Also, the electric elements (203) and the wiring patterns (201) can be prevented from being contaminated by an abrasive liquid. In this manner, it is possible to obtain an electric element built-in module whose thickness can be reduced and while maintaining [[its]] mechanical strength.